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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,717	08/09/2002	Kuo-Liang Lin	9190-US-PA	1892

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JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE
7 FLOOR-1, NO. 100
ROOSEVELT ROAD, SECTION 2
TAIPEI, 100
TAIWAN

EXAMINER

SCHAFFER, JONATHAN C

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 09/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/064,717	Applicant(s) LIN ET AL.	
	Examiner Jonathan C. Schaffer	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 August 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/9/02</u> . | 6) <input type="checkbox"/> Other: _____ |

✓

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-10 and 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Schiller (U.S. Patent Number 4,544,267).

1. An optical platen used within an optical system of a fingerprint image capture apparatus, the optical platen comprising

a contact face provided with a dull rough surface

Schiller discloses an optical platen that has a deformable resilient surface layer that conforms to the pattern of ridges and valleys and that enhances the modulation of the light beam (col. 3, l. 13-15), which when conforming to the ridges and valleys would have to be rough just as any other surface with ridges and valleys is.

against which a finger is placed to pickup a fingerprint image,

A finger is pressed against the surface of Schiller's platen to provide a fingerprint object that is constituted by a series of ridges and valleys (col. 3, l. 6-8).

and an opposite viewing face exhibiting a smooth surface through which a fingerprint image light, resulted from a scattering of an incident light striking the contact face,

A beam is directed towards Schiller's platen at a slight angle to normal, and passes through the transparent substrate of the platen which is held to a high degree of flatness (col. 13, l. 20-22) to be reflected from the fingerprint object as a modulated beam (col. 3, l. 8-12).

emerges out of the optical platen to be captured by an image sensor.

This reflected modulated signal is projected on a linear array of photo-responsive devices (col. 3, l. 23-24)

2. The optical platen of claim 1, wherein the material of the optical platen includes transparent glass or plastics.

Schiller discloses a glass platen (col. 4, l. 3-4)

3. The optical platen of claim 1, wherein the contact face has an adequate roughness to respectively enable light scattering at the region of the contact face touched by a fingerprint ridge, and light scattering and refraction at the region of the contact face corresponding to a fingerprint valley, thereby the fingerprint ridge appears as a brighter region and the fingerprint valleys as a darker region on a formed fingerprint image.

Schiller discloses an optical platen that has a deformable resilient surface layer that conforms to the pattern of ridges and valleys and that enhances the modulation of the light beam (col. 3, l. 13-15), which when conforming to the ridges and valleys would have to be rough just as any other surface with ridges and valleys is. At any position of the scan, the light beam is

modulated by the object being scanned to produce light and dark spots corresponding to finger valley and ridge zones (col. 3, l. 20-23). The ridges scatter the reflected light substantially more than do the valleys (col. 3, l. 59-60) thus the ridges will be brighter and the valleys darker.

4. The optical platen of claim 1, wherein the contact face and the viewing face are generally planar.

Schiller discloses a platen that as can be seen in Fig. 1 #32 can be seen to be a flat or level surface of a material body which is what oxford's dictionary defines as a plane and related in some way to, a plane which is what oxford's dictionary defines as planar, thus clearly the depicted platen planar.

5. The optical platen of claim 1, wherein the optical platen has a general shape that is substantially flat.

Schiller discloses a platen that as can be seen in Fig. 1 #32 can be seen to be flat.

6. An optical system for fingerprint image capture, the optical system being installed within an electronic device that includes an image capture window, the optical system comprising:

an optical platen, including a contact face provided with a dull rough surface

Schiller discloses a system for fingerprint image capture with an optical platen that has a deformable resilient surface layer that conforms to the pattern of ridges and valleys and that enhances the modulation of the light beam (col. 3, l. 13-15), which when conforming to the ridges and valleys would have to be rough just as any other surface with ridges and valleys is.

against which a finger is placed to pickup a fingerprint image,

A finger is pressed against the surface of Schiller's platen to provide a fingerprint object that is constituted by a series of ridges and valleys (col. 3, l. 6-8).

and an opposite viewing face exhibiting a smooth surface, wherein the optical platen is mounted to the image capture window with the contact face outwardly oriented and the viewing face inwardly oriented;

As can be seen in Fig. 1 and Fig. 8 the contact face is outwardly oriented and the viewing face inwardly oriented.

a light source, placed proximate to the viewing face, and emitting an incident light that passes into the optical platen and strikes the contact face;

The light source being a laser 16 coupled with lenses 18 and 20, and directional mirrors 22 and 26 is placed proximate to the viewing face. The beam is directed towards the platen at a slight angle to normal, and passes through the transparent substrate of the platen to be reflected from the fingerprint object as a modulated beam (col. 3, l. 8-12).

and an image sensor, placed proximate to the viewing face of the optical platen to receive an emerging image light resulted from a scattering of the incident light on the contact face against which the finger is placed.

This reflected modulated signal is projected on a linear array of photo-responsive devices (12 in Fig. 1, for example and col. 3, l. 23-24) which has been placed proximate to the viewing face.

7. The optical system of claim 6, wherein the material of the optical platen is made of transparent glass or plastics.

Schiller discloses a glass platen (col. 4, l. 3-4)

8. The optical system of claim 6, wherein the contact face has an adequate roughness to respectively enable light scattering at the region of the contact face touched by a fingerprint ridge, and light scattering and refraction at the region of the contact face corresponding to a fingerprint valley, thereby the fingerprint ridge appears as a brighter region and the fingerprint valleys as a darker region on a fingerprint image formed via the image sensor.

Schiller discloses an optical system with an optical platen that has a deformable resilient surface layer that conforms to the pattern of ridges and valleys and that enhances the modulation of the light beam (col. 3, l. 13-15), which when conforming to the ridges and valleys would have to be rough just as any other surface with ridges and valleys is. At any position of the scan, the light beam is modulated by the object being scanned to produce light and dark spots corresponding to finger valley and ridge zones (col. 3, l. 20-23). The ridges scatter the reflected light substantially more than do the valleys (col. 3, l. 59-60) thus the ridges will be brighter and the valleys darker.

9. The optical system of claim 6, wherein the contact face and the viewing face are generally planar.

Schiller discloses an optical system with a platen that as can be seen in Fig. 1 #32 can be seen to be a flat or level surface of a material body which is what oxford's dictionary defines as a plane and related in some way to, a plane which is what oxford's dictionary defines as planar, thus clearly the depicted platen planar.

10. The optical system of claim 6, wherein the optical platen has a general shape that is substantially flat.

Schiller discloses an optical system with a platen that as can be seen in Fig. 1 #32 can be seen to be flat.

13. The optical system of claim 6, wherein the image sensor includes a charge coupled device (CDD), a complementary metal oxide semiconductor (CMOS) device, or a contact image sensor (CIS).

Schiller discloses an optical system wherein the image sensor in one embodiment is a CCD (col. 3, l. 25)

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schiller (U.S. Patent Number 4,544,267) as applied to claim 6 above, and in view of Hitt (U.S. Patent Number 2,569,310), and in further view of Prokoski et al. (U.S. Publication Number 2002/0140542 henceforth referred to as Prokoski).

11. The optical system of claim 6, wherein the optical platen is further movably mounted to the image capture window in a manner to be capable of covering and uncovering the image capture window, thereby the optical system is enabled to be configured to a fingerprint image capture configuration when the optical platen covers the image capture window, and to a farther environment image capture configuration as a video camera optical system when the optical platen uncovers the image capture window.

Schiller discloses a fingerprinting system with an optical platen which covers the capture window and a CCD array to read the fingerprint. Schiller does not disclose a system where the platen is removable nor able to be used as a video camera. Hitt discloses a fingerprinting system where the platen is removable by sliding the platen (col. 3, l. 42-45). Hitt does not disclose a finger printing system that can also be used as a video camera. Prokoski discloses a biometric authentic system which uses fingerprints as an authentication option (Claim 3) as well as using the same device to provide video conferencing capabilities (§ 70). It would have been obvious at the time the invention was made to one of ordinary skill in the art to utilize the removable platen feature of Hitt with the fingerprinting system of Schiller and the biometric authentication system of Prokoski in order to reduce the amount of space required for the system while at the same time allowing Prokoski's video camera image capture cells to double as the image sensor in Schiller's fingerprinting system thus reducing system resource requirements and lengthening battery life which is of utmost importance in today's increasingly mobile world.

14. An application of an optical system according to claim 11, wherein the optical system is installed within a mobile phone to achieve an internal image capture apparatus that is enabled to be configured to pickup either a fingerprint image or a farther environment image.

Schiller discloses a fingerprinting system but does not disclose this system embodied within a cell phone. Prokoski discloses a biometric authentic system which uses fingerprints as an authentication option (Claim 3) as well as using the same device to provide video conferencing capabilities (§ 70), in addition this system is embodied within a cell phone (Claim 9). It would have been obvious at the time the invention was made to one of ordinary skill in the art to utilize the fingerprinting system disclosed by Schiller with the cell phone biometric authentication system disclosed by Prokoski in order to reduce the amount of space required for the system while at the same time allowing Prokoski's video camera image capture cells to double as the image sensor in Schiller's fingerprinting system thus reducing system resource requirements and lengthening battery life which is of utmost importance in a cellular phone system.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schiller (U.S. Patent Number 4,544,267) as applied to claim 6 above, and further in view of Antonelli et al. (U.S. Patent Number 6,259,108 henceforth referred to as Antonelli).

12. The optical system of claim 6, wherein the light source includes light-emitting diodes (LED).

Schiller discloses an optical fingerprinting system with a light source (16) but does not disclose this light source to be an LED. Antonelli discloses an optical fingerprinting system with an LED for a light source. It would have been obvious at the time the invention was made to one of ordinary skill in the art to utilize the LED light source disclosed by Antonelli in place of the light source disclosed by Schiller in order to reduce the size of the system to a fraction of the originally

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disclosed system. Lasers require much more space than LED's, LED's generally require less power which in a battery powered system is always a significant concern.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan C. Schaffer whose telephone number is (571)272-0603. The examiner can normally be reached on 7:30am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on (571)272-7695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JCS

JOSEPH MANCUSO
PRIMARY EXAMINER